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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/003,120	12/06/2001	Makoto Hazama	011532	5226

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EXAMINER

KENEDY, ANDREW A

ART UNIT PAPER NUMBER

1631

DATE MAILED: 12/17/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/003,120	HAZAMA, MAKOTO	
	Examiner	Art Unit	
	Andrew A. Kenedy	1631	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). ____ . |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ . | 6) <input type="checkbox"/> Other: ____ . |

DETAILED ACTION

Priority

Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in parent Application No. 10003120, filed on December 6, 2001.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1 and 2 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With regard to claim 1, the claim preamble requires that the method include the active step of electrophoresing a fragment sample of nucleic acid. However, none of the steps of the claim include the act of electrophoresing a fragment sample of nucleic acid. It is therefore unclear whether applicant intends for the active step of electrophoresing a fragment sample of nucleic acid to be included in the method or not. Applicant must clarify this.

With regard to claim 2, it is unclear whether FFT treatment is applied as the waveform shaping by Fourier transformation in only step (A) of claim 1, only step (D) of claim 1, or both steps (A) and (D). Applicant must clearly indicate which applications of FFT treatment are intended.

Claim Rejections - 35 USC § 102

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3 are rejected under 35 U.S.C. 102(b) as being anticipated by Allison et al. (US 5748491 A).

Allison et al. teaches a method of determining a base sequence for nucleic acid encompassing electrophoresis of a fragment sample of nucleic acid and determination of the base sequence of the nucleic acid on the basis of detected data (see at least col. 1, lines 6-8; col. 2, lines 42-44; and col. 4, lines 8-21), comprising steps of: (A) performing waveform shaping by Fourier transformation on data of a certain number N of points from the head of the detected data with a parameter of a previously set peak interval (see at least col. 2, lines 45-53; col. 2, line 66 through col. 3, line 5; col. 6, lines 1-6; and col. 6, lines 20-38); (B) determining the base sequence as to data of P points ($P < N$) from the head of the data of N points (see at least col. 2, lines 45-65; col. 6, lines 29-41; col. 9, line 53 through col. 10, line 3; and Fig. 6A and 6B); (C) obtaining a peak interval from the result of the sequence determination (see at least col. 1, lines 44-51; col. 2, lines 17-23; col. 3, lines 7-12; col. 5, line 16 through col. 6, line 38), (D) performing waveform shaping by Fourier transformation on data of N points from a position returning by L points ($L < M$) from final data precedently subjected to the sequence determination with a parameter of a precedently obtained peak interval (see at least col. 6, lines 39-52; col. 6, lines 59-67; and col. 7, lines 52-63) (E) determining the base sequence as to data of M points ($M < N$) of a central portion to be connected with data precedently subjected to the sequence determination among data of N points subjected to second or later waveform shaping, wherein the steps (E) --> (C) --> (D) are repeated until data disappear or no analysis is required

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despite presence of data (col. 2, lines 48-65; and col. 7, lines 64-67); wherein FFT treatment is applied as the waveform shaping by Fourier transformation (see at least col. 7, lines 62-64); and wherein the method assuming that N is equal to 2^n , M is equal to $2^{(n-1)}$ and L is equal to $2^{(n-2)}$ (see at least Fig. 5B; and col. 6, lines 50-52). Note that while Allison et al. does not assign the same designations to the data point intervals and data analysis windows as the applicants designations (N is equal to 2^n , M is equal to $2^{(n-1)}$, and L is equal to $2^{(n-2)}$), Allison et al. discloses a 50% overlap between data analysis windows, which is the same amount of overlap dictated by solving the applicant's above equations for any positive number of data points (N).

Made of Record

It is made of record that foreign patent document No. JP4244953, listed in the applicant's IDS, appears to be anticipatory of the applicant's instant invention and therefore may be used as prior art that could result in an additional set of rejections, pending examiner's acquisition of an English translation of the document and subsequent evaluation.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew A. Kenedy whose telephone number is 703-305-4842 (after January 12, 2003, use telephone number 571-272-0574). The examiner can normally be reached on Monday-Friday 9:00am-5:00 pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Woodward can be reached on 703-308-4028. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4842.

A.A.K.
December 8, 2003

Marianne P. Allen
MARIANNE P. ALLEN
PRIMARY EXAMINER
AD1631